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ABSTRACT

This exploratory study examined the relationship between reading performance scores and three measures of home environment among kindergarten students of differing racial and ethnic background. It also determined whether there was evidence that participation in a Follow Through Program had been effective in overcoming educational disadvantages associated with nonsupportive home environments. Subjects in the study were kindergarten students who had finished their first year in a Follow Through Program; 11 were Mexican-American, 10 were Anglo-American, and 9 were Afro-American. Four of the Mexican American, seven of the Afro-American, and four of the Anglo-American students had been in a pre-kindergarten Head Start Program the year before. Home environment measures used were: (1) a modified 40-item version of the Dave and Wolf interview schedule for assessing home influences on achievement and intelligence; (2) interviewer's rating of the orderliness of the living room in each subject's home; and (3) the frequency with which the subject's mother attended church. Results show the strongest correlations between home-environment measures and reading level were among the Anglo-American and Afro-American students. Most important of the findings was that measures of home environment correlated with reading level among the sample of economically disadvantaged students finishing kindergarten. (DB)

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Research Note: Home Environment and Reading Performance Among Afro, Anglo, and Mexican Kindergarten Students in an Inner City School

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The purposes of this exploratory study were to examine the relationship between reading performance scores and three measures of home environment among kindergarten students of differing racial and ethnic background at an inner city school and to determine whether there was evidence that their participation in a Follow Through Program had been effective in overcoming educational disadvantages associated with non-supportive home environments. The study is exploratory in the sense that the sample is too small to justify reliable conclusions and further research is needed to establish their generalizability.

Procedures

Switzer Elementary School is located on the west side of Kansas City and serves one of the most economically depressed neighborhoods in the city. Approximately forty percent of the students at Switzer are of Mexican-American descent, with the remainder of the student body divided between students of Anglo-American and Afro-American descent.[1] Subjects in the study were kindergarten students who had

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[1]As used in this paper, the term "Anglo-American" refers to white students who were not of Mexican-American or other Spanish-speaking descent. No attempt was made to distinguish between non-Mexican white students from Anglo-American, Slavic-American, Italo-American, or other ethnic groups.

finished their first year in a Follow Through program in the spring of 1970.[2] Eleven of the students included in the study were Mexican-American, ten were Anglo-American, and nine were Afro-American. Four of the Mexican-American students had been in a pre-kindergarten Head-start program the previous year, as had seven of the Afro-American students and four of the Anglo-American students. It is safe to assume that all of the subjects were working class or lower-working class in socio-economic status.

Reading level scores used in the study were taken from students' records and were obtained in the spring of 1970 by Follow Through staff members who administered a reading achievement test assessing alphabet recognition, sight vocabulary, and performance on 32 lessons from the Sullivan Programmed Reading Series. Reading levels ranged from 1 (high) to 5 (low).

Home environment measures used in the study included:

1. A slightly-modified forty-item version of the interview schedule developed by Dave and Wolf to assess home influences on achievement and intelligence. The schedule contains nine separate sub-sections dealing with the intellectual environment of the home.[3] Each aspect

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[2]The Follow Through program at Switzer utilized the Edison Response Environment ("talking typewriter").

[3]The nine sub-sections are: Nature of Intellectual Expectations for the Child; Nature of Intellectual Aspirations for the Child; Information about the Child's Intellectual Development; Nature of Rewards for Intellectual Accomplishment; Emphasis on the Use of Language in a Variety of Situations; Emphasis on Correctness of Language Usage; Quality of the Language Usage of the Mother; Opportunities Provided for Learning Outside the Home; and Nature and Amount of Assistance Provided to Facilitate Learning in a Variety of Situations.

of home environment is rated from 1 (low) to 7 (high). Validation studies conducted by Dave and Wolf showed that home environment scores obtained with their schedule correlated approximately .8 with achievement and .7 with I.Q. scores.[4]

2. The second measure of home environment was the interviewer's rating of the orderliness of the living room in each subject's home. Ratings ranged from 1 (low) to 3 (high). One reason this item was used was because a previous study conducted by Peterson and DeBord in Nashville had found it was the best single home-related predictor of achievement among their sample of low-status, eleven-year-old, white boys.[5]

3. The third measure of home environment was a score given to each subject based on the frequency with which his mother attended church. Scores ranged from 1 (low) to 3 (high) and were derived from information given by the mother. One reason this item was used was that Peterson and DeBord had found it to be the best single home-related predictor of achievement among their sample of low-status, eleven-year old black males, for whom mothers' church attendance was negatively correlated with achievement. This finding was interpreted as suggesting that church attendance may have been a proxy variable which indirectly measured the extent to which the families of low-status black

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[4]Robin H. Farquhar, "Home Influences on Achievement and Intelligence: An Essay Review," Administrator's Notebook, v. 13, no. 5 (January, 1965).

[5]Richard A. Peterson and Larry DeBord, Educational Supportiveness of the Home and Academic Performance of Disadvantaged Boys. IMRID Behavioral Science Monograph No. 3 Nashville: George Peabody College for Teachers Institute on Mental Retardation and Intellectual Development, 1966.

students in Nashville exemplified achievement-inhibiting aspects of the traditional working-class culture among black families in the south.

In the remainder of this paper, scores on the Dave-Wolf schedule and the living room and church attendance ratings will be referred to as IE (Intellectual Environment), LR, and CA, respectively.

All scores and ratings were obtained by one of the investigators who visited subjects' homes at a time convenient to their mothers and was able to converse in simple Spanish with Mexican-American mothers. Another observer accompanied him on three interviews and independently scored these three subjects on Dave-Wolf's nine sub-categories. The observer's ratings on these nine-point scales agreed exactly with the interviewer's rating 15 of the twenty-seven sub-section scores and disagreed by only one interval on nine of the remaining twelve scores.

Results

Pearson product-moment correlations between reading level and the three home environment measures computed for the total sample and for each racial or ethnic group separately are shown in Table 1.

As shown in Table 1, the strongest correlations between home-environment measures and reading level were found among the Anglo-American and Afro-American sub-samples, for which IE and reading level correlated at -.90 and -.61 respectively. For the Mexican-American sub-sample, these two variables were essentially uncorrelated. One possible explanation for this latter finding is that since some

Table 1

Correlations Between Reading Level and
Home Environment Measures

Home Environment Measure[a]	Group			
	Total Sample (N=30)	Afro-American (N=9)	Anglo-American (N=10)	Mexican-American (N=11)
IE	-.33	-.61	-.90	-.03
LR	-.08	-.28	-.41	.22
CA	-.03	-.38	-.31	.43
IE, LR, and CA (Multiple)	.37	.70	.91	.51
CA (Partial, IE and LR controlled)	.09	-.37	.39	.43

[a] IE = Dave-Wolf Interview Schedule Score; LR = Orderliness of Living Room; CA = Frequency of Church Attendance

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Mexican-American students in the sample lived in homes in which Spanish was the main or even the sole language, interview ratings concerning the quality of English spoken by the mother were less useful indicators of the degree to which cognitive and motivational forces in these homes contributed to success in existing school programs than were the ratings for Anglo- and Afro-American mothers. After re-examination of the IE sub-scale scores for Mexican-American subjects showed that the mothers of three subjects within this group received ratings of 1 on the three language sub-sections of the Dave-Wolf schedule (Emphasis on the Use of Language in a Variety of Situations; Emphasis on Correctness of Language Usage; Quality of the Language Usage of the Mother), new correlations between reading level and IE were computed first for the Mexican-American sub-sample minus these three respondents and then for the entire sub-sample of eleven with language sub-sections omitted from the IE score. However, these procedures yielded correlations of only .05 and .00 respectively. Thus this pattern suggested that home environment variables tapped by the Dave-Wolf schedule may not be as potent in predicting school achievement among disadvantaged Mexican-American students as among disadvantaged Anglo and Afro students. It is possible that other home environment variables not tapped in this study may be particularly important among youngsters of Mexican-American descent. One also can speculate that the Follow Through program might have been particularly helpful for Mexican-American students, who probably

needed more help learning English than did other subjects in the study.[6]

Discussion

The most important finding of this study was that measures of home environment correlated with reading level among our sample of economically disadvantaged students finishing kindergarten even though all had been in a one-year Follow Through program.[7] As noted above, strong relationships between home environment and reading level were found for Anglo students, for whom the correlation between Dave-Wolf IE scores and reading level was .90 and the multiple correlation between reading level and the three home environment measures was .91, and for black students, for whom IE and reading level correlated at .61 and the multiple correlation between reading level and the three home environment measures was .70. The fact that the multiple correlations enable us to account for 83% and 49% of the respective variances in reading level for the Anglo-American and Afro-American samples, despite the small N's, the Follow Through experience of subjects, and the restricted

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[6] It is interesting to note that the partial correlations (Table 1) found between church attendance of the mother and reading level with LR and IE controlled were positive in the case of Anglo- and Mexican-American subjects (.39 and .43, respectively) but negative (-.37) for the Afro-American subjects. Although differences of this magnitude are not reliable in a small sample, the pattern suggests the possibility that church attendance among economically disadvantaged Anglo-Americans and Mexican-Americans may function in a different way than it does among disadvantaged Afro-Americans; thus it accords well with Peterson and DeBord's finding concerning differences between disadvantaged white and black students in Nashville. Inferentially, this aspect of working-class culture may be associated with high achievement among Anglo and Chicano youngsters, whereas the reverse may be true for black youngsters--at least in some neighborhoods in Nashville and Kansas City. Further research exploring these possibilities with larger samples might prove very fruitful.

[7] Inspection of the data and t tests computed for the three ethnic groups and for the sample as a whole showed no significant differences or noticeable trends between either the reading levels or the IE scores of students who had and had not been in Headstart.

range of scores (from 1 to 3 on LR and CA, from 1 to 5 on reading level), underlines the close association which often can be found between home environment and achievement in existing school programs, particularly when racial and ethnic differences are taken into account by analyzing these relationships separately for differing groups. In addition, it also must be kept in mind that our entire sample consisted of economically disadvantaged students; most likely a sample incorporating a greater range on socioeconomic and family background would show a still closer relationship between reading level and home environment.

Our data do not necessarily mean that the Follow Through program was ineffective in improving reading achievement. For example, it is possible that reading performance was enhanced throughout the sample or that some students overcame initial disadvantages even though relative achievement rankings changed very little. It is also possible, though perhaps unlikely, that the Follow Through program will have a delayed impact and that skills acquired in it might allow the low-performing students in our sample to surpass some of their classmates at a later date. All we can say with certainty is that the Follow Through program did not overcome or override the relatively low standing in reading (as compared with classmates) of subjects from relatively non-supportive home environments, particularly those of Anglo- and Afro-American descent.